



OFFICE OF THE VICE PRESIDENT - RESEARCH AND INNOVATION

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To: City Councilmembers, City of Long Beach  
via: Connor Lock, Chief of Staff, Council District 2 for City of Long Beach  
From: Scott Brandt, PhD, Special Advisor to the UC Vice President for Research & Innovation and UC Director of the ARCHES Initiative  
Subject: City of Long Beach Resolution of support for the Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES)  
Date: July 8, 2022

On behalf of the University of California (UC) System, I am pleased to extend my congratulations to the City Council body of the City of Long Beach for its actions to adopt a pathbreaking resolution in support of the California's Statewide Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES) initiative as it applies for federal Hydrogen Hub designation and funding.

UC serves as the research arm of the State of California, encompassing ten campuses spanning the state, three affiliated national laboratories, six academic medical centers, and a division of agricultural and natural resources. UC performs nearly ten percent of all academic research in the United States. As a founding member of ARCHES, the University of California is committed to working with the City and Port of Long Beach, and local, regional and statewide industry, utility and community partners towards needed deep decarbonization, pollution reduction, and the betterment of local communities.

By joining and participating in the formation and establishment of ARCHES, the City and Port of Long Beach will be well-positioned to advance local and regional clean hydrogen hub development goals and ensure investments for clean hydrogen production, storage, distribution, and use. Importantly, engagement with ARCHES will help ensure that the development and deployment of new zero-emission hydrogen technologies addresses the concerns and needs of frontline communities who have borne a disproportionate burden of environmental impacts.

### **What is ARCHES and why would it serve as the California-wide renewable H<sub>2</sub> hub?**

ARCHES is a statewide public-private partnership built on California's long-standing hydrogen and renewable energy leadership to serve as the applicant and organizer for a statewide hydrogen hub.

The State—led by GO-Biz alongside other state agencies, the legislature, local governments, and the State's institutions of higher education, including UC and its three national laboratories—provides vision, leadership, oversight, accountability, and matching funds for ARCHES. Industry partners bring deep technical expertise and capability for building a hydrogen network in California and significant in-kind matching capacity. Local governments, environmental justice advocates, nonprofits, and organized labor bring a strong focus on community engagement, public health, environmental protection, workforce development, and other issues of critical importance.

ARCHES will include major deployment clusters in the Los Angeles Basin and Bay Area and extend into the Central Valley, Inland Empire, and other regions (and possibly neighboring states) with high renewable resources, geologic storage possibilities, key transportation corridors, and need for clean energy and reduced pollution.

### **Why a California renewable H<sub>2</sub> hub is poised to succeed and meet California's needs**

The Infrastructure Investment and Jobs Act requires at least one Hub to produce hydrogen using renewable resources. California's leadership and early efforts on transitioning to 100% renewable, zero-carbon electricity, and developing hydrogen infrastructure makes the State especially competitive to win a renewable clean hydrogen hub award. California's extensive renewables portfolio will be essential to power electrolyzers that make clean, renewable hydrogen, decarbonize sectors that are hard to electrify directly, and develop long-duration energy storage solutions.

A hydrogen hub is an excellent investment of California resources. It will fast-track the development and implementation of hydrogen infrastructure in California, grow California's clean energy economy, advance environmental justice goals by accelerating the transition to zero-emissions technologies in polluted communities, provide good high-road union careers and clean energy job training to California's workforce, provide R&D funding to develop the technological innovations needed to advance clean hydrogen technology, and kickstart California's hydrogen marketplace, giving California a competitive edge as the new hydrogen economy emerges.

The hydrogen economy also presents real opportunities to retain and expand California's clean energy workforce, which will build out the vast renewable energy generation needed to power electrolyzers and implement hydrogen production, storage, delivery, and end-use technologies. The conversion of significant fossil fuel distribution infrastructure will also allow for sustained employment otherwise at risk in the transition to clean energy.

As a founding member of the ARCHES initiative, the University of California, as one of the largest educational systems worldwide, has a vested interest in ensuring California's successful bid for a DOE Clean Hydrogen Hub, towards realization of California's greenhouse gas reduction and clean hydrogen goals, and in establishment of a robust statewide clean hydrogen economy. We commend your vision, leadership and collective efforts, and reiterate our commitment to working in partnership with the City and Port of Long Beach towards the establishment of a clean hydrogen economy which will advance the interests of and benefit all communities.

Sincerely,



Scott A. Brandt, Ph.D.  
Special Advisor for Research & Innovation  
UC Director of the ARCHES Initiative